

Application No. 10/667,026
Amendment dated March 28, 2006
Reply to Office Action of January 10, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

CLAIMS:

Please amend claims 1, 11, 23, 33, 34, and 44, as follows:

1. (Currently Amended) A method for marine navigation, comprising:
receiving one or more preselected conditions from a user, the preselected conditions being selected from the group of ~~land~~, water depth, ~~rock(s)~~, sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, ~~underwater obstacles~~, and type of water bottom;
identifying a potential waypoint; and
performing a marine route calculation algorithm to ~~analyze~~ route a course between a first location and the potential waypoint ~~in view of~~ avoiding the preselected conditions.

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2. (Original) The method of claim 1, wherein performing the marine route calculation algorithm includes analyzing cartographic data that include preselected conditions between the first location and the potential waypoint with a preference for avoiding preselected conditions.
3. (Original) The method of claim 2, wherein performing the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.
4. (Original) The method of claim 3, wherein re-routing the course calculated further includes identifying one or more non-user waypoints between the first location and the potential waypoint.
5. (Original) The method of claim 2, further including determining the first location on the course based on a signal from a global positioning system (GPS); and analyzing cartographic data for a predetermined area around the first location for preselected conditions.

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6. (Original) The method of claim 5, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.
7. (Original) The method of claim 2, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.
8. (Original) The method of claim 7, wherein providing the alert signal includes emitting an audio alert.
9. (Original) The method of claim 7, wherein providing the alert signal includes displaying a visual alert.
10. (Previously Presented) The method of claim 1, the preselected conditions including a weather condition.

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11. (Currently Amended) A method for marine navigation, comprising:
- receiving one or more preselected conditions from a user, the preselected conditions being selected from the group of ~~land~~, water depth, ~~rock(s)~~, sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, ~~underwater obstacles~~, and type of water bottom;
- identifying a potential waypoint;
- analyzing cartographic data between a first location and the potential waypoint for the preselected conditions; and
- providing an alert signal when cartographic data between the first location and the potential waypoint indicate the preselected conditions.
12. (Original) The method of claim 11, wherein performing the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.
13. (Original) The method of claim 12, wherein re-routing the course further includes identifying one or more non-user waypoints between the first location and the potential waypoint.

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14. (Original) The method of claim 11, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.
15. (Original) The method of claim 11, further including determining the first location on the course based on a signal from a global positioning system (GPS); and analyzing cartographic data for a predetermined area around the first location for preselected conditions.
16. (Original) The method of claim 15, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.
17. (Original) The method of claim 11, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).
18. (Previously Presented) The method of claim 11, the preselected conditions including a water depth.

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19. (Previously Presented) A method for marine navigation, comprising:
- receiving one or more preselected conditions from a user;
 - receiving a user defined graphical filter area from the user;
 - identifying the user defined graphical filter area on a display;
 - analyzing cartographic data only within the user defined graphical filter area for the preselected conditions; and
 - providing an alert signal when cartographic data within the user defined graphical filter area indicate the preselected conditions.
20. (Original) The method of claim 19, wherein identifying the user defined graphical filter area includes repositioning the user defined graphical filter area.
21. (Original) The method of claim 19, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).
22. (Original) The method of claim 19, further including receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas.

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23. (Currently Amended) A computer readable medium having a set of computer readable instructions, the set of computer readable instructions comprising instructions for: receiving one or more preselected conditions from a user, the preselected conditions being selected from the group of ~~land~~, water depth, ~~rock(s)~~, sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, ~~underwater obstacles~~, and type of water bottom; identifying a potential waypoint upon a first event; and performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in view of the preselected conditions.

24. (Original) The computer readable medium of claim 23, wherein performing the marine route calculation algorithm includes analyzing cartographic data between the first location and the potential waypoint to avoid preselected conditions.

25. (Original) The computer readable medium of claim 24, wherein performing the marine route calculation algorithm further includes re-routing the course to avoid the preselected conditions when the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

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26. (Original) The computer readable medium of claim 25, wherein re-routing the course further includes identifying one or more non-user waypoints between the first location and the potential waypoint.

27. (Original) The computer readable medium of claim 23, further including determining the first location on the course based on a signal from a global positioning system (GPS); and analyzing cartographic data for a predetermined area around the first location for preselected conditions.

28. (Original) The computer readable medium of claim 27, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

29. (Original) The computer readable medium of claim 23, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).

30. (Original) The computer readable medium of claim 23, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

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31. (Original) The computer readable medium of claim 30, wherein providing the alert signal includes emitting a signal for an audio alert.
32. (Original) The computer readable medium of claim 30, wherein providing the alert signal includes displaying a visual alert.
33. (Currently Amended) The computer readable medium of claim 23, the preselected conditions including ~~an underwater obstacle~~ a water depth.

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34. (Currently Amended) An electronic marine navigation device, comprising:
- a processor;
 - a user interface operatively coupled to the processor, wherein the user interface receives one or more preselected conditions from a user, the preselected conditions being selected from the group of ~~land~~, water depth, ~~rock(s)~~, sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, ~~underwater obstacles~~, and type of water bottom;
 - a location input operatively coupled to the processor, wherein the location input receives a first location and a potential waypoint separate from the first location; and
 - a memory operatively coupled to the processor and the location input, the memory having cartographic data including data related to the preselected conditions, wherein the processor operates on a marine route calculation algorithm to analyze a course between the first location and the potential waypoint in view of the preselected conditions of the cartographic data.
35. (Original) The electronic marine navigation device of claim 34, wherein the processor operates on the route calculating algorithm to analyze cartographic data to identify and avoid preselected conditions in the course between the first location and the potential waypoint.

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36. (Original) The electronic marine navigation device of claim 35, wherein the processor operates on the route calculating algorithm to re-route the course to avoid the preselected conditions when the processor operating on the marine route calculation algorithm identifies one or more preselected conditions between the first location and the potential waypoint.

37. (Original) The electronic marine navigation device of claim 36, wherein the processor operates on the route calculating algorithm to identify one or more non-user waypoints between the first location and the potential waypoint.

38. (Original) The electronic marine navigation device of claim 35, further including a receiver for a global positioning system (GPS) operatively coupled to the processor, wherein the processor determines the first location on the course based on a signal received from the GPS, and analyzes cartographic data for a predetermined area around the first location for preselected conditions.

39. (Original) The electronic marine navigation device of claim 38, wherein the processor provides an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

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40. (Original) The electronic marine navigation device of claim 35, wherein the processor provides an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

41. (Original) The electronic marine navigation device of claim 34, wherein the location input receives a user defined graphical filter area, and wherein the processor operates on the marine route calculation algorithm to analyze cartographic data within the defined graphical filter area for preselected conditions and wherein the processor provides an alert signal when the analyzed cartographic data for the user defined graphical filter area includes preselected conditions.

42. (Previously Presented) The method of claim 1, wherein both the first location and the potential waypoint are independent of a current location of a device implementing the method.

43. (Previously Presented) The method of claim 1, wherein at least a portion of the course is unrelated to a current heading of a device implementing the method.

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44. (Currently Amended) A method for marine navigation, comprising:
- identifying a potential waypoint; and
 - performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in ~~view of~~ order to avoid preselected conditions received from a user and selected from the group of naturally occurring land mass, water depth, ~~rock(s)~~, sandbars, shelves, wind conditions, weather conditions, ice, ~~underwater obstacles~~, and type of water bottom.

Please add claims 45-50 as follows:

45. (New) A method for marine navigation, comprising:
- receiving indication of a minimum water depth from a user;
 - identifying a potential waypoint; and
 - performing a marine route calculation algorithm to route a course between a first location and the potential waypoint avoiding water depth less than the minimum water depth.
46. (New) The method of claim 45, displaying a visual indication of places along the calculated course where the water depth is expected to approach the minimum water depth.

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47. (New) A method for marine navigation, comprising:
- receiving indication of a minimum water depth from a user;
 - displaying marine cartographic data;
 - receiving indication of a potential waypoint;
 - displaying a substantially straight line between a first location and the potential waypoint, wherein the line depicts both where the water depth is expected to be greater than the minimum water depth and where the water depth is expected to be less than the minimum water depth; and
 - performing a marine route calculation algorithm to route a course between the first location and the potential waypoint avoiding water depth less than the minimum water depth.

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48. (New) A method for marine navigation, comprising:
- displaying marine cartographic data;
 - receiving indication of a potential waypoint;
 - displaying a substantially straight line between a first location and the potential waypoint, wherein the line depicts both where the water depth is expected to be greater than a preset minimum water depth and where the water depth is expected to be less than the minimum water depth; and
 - performing a marine route calculation algorithm to route a course between the first location and the potential waypoint avoiding water depth less than the minimum water depth.
49. (New) The method of claim 48, wherein the minimum water depth is user selectable.
50. (New) The method of claim 48, wherein the line is depicted in a first manner where the water depth is expected to be greater than the minimum water depth and the line is depicted in a second manner where the water depth is expected to be less than the minimum water depth.